ABSTRACT OF THE DISCLOSURE

The invention is a portable gait analyzer comprising of at least one independent rear foot motion collection unit, at least one independent lower shank motion collection unit, plantar pressure collection unit, at least one processing and display unit, and a soft casing unit. A plurality of accelerometers, rate sensors, force sensor resistors, and pressure sensors provide for the acquisition of acceleration signals, angular velocity signals, foot force signals, and foot pressure signals to be processed. At least one central processing unit, a plurality of memory components, input/output components and ports, telemetry components, calibration components, liquid crystal displays components for the processing and outputting of three dimensional acceleration, angular velocity, tilt, and position. The rearfoot motion collection unit and lower shank motion collection unit interact with the processing and display unit to calculate rear foot kinematic data crucial to identify the motions of pronation and supination. The plantar pressure collection unit interacts with the processing and display unit to calculate plantar pressure data crucial to identify the center of pressure line and excessive and abnormal loads on the sole of the foot. These factors of rear-foot kinematics and plantar pressure lead to gait style identification.